

## REMARKS

The application has not been amended.

Claims 1-49, 77-84, 87, 88 and 90 remain pending in the application. Claims 50-76, 85, 89, 91 and 92 were previously canceled. Reconsideration and allowance of all of the claims is respectfully requested in view of the following remarks.

In regard to Rejection of Claims 1-49, 77-84, 87-88 and 90 Under 35 USC §112, first paragraph

The Examiner has rejected claims 1-49, 77-84, 87-88 and 90 Under 35 USC §112, first paragraph, as failing to comply with the written description requirement, on the basis that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Specifically, the Examiner asserts that

applicant's original disclosure does not refer to a tunnel, but rather simply a "frame". Even applicant's Canadian patent application, which he has incorporated by reference, does not describe a piece of bent metal. It shows a frame 10 with a tunnel area 27, but does not indicate it is formed from a single sheet of metal. In fact, a tunnel could be formed from any number of materials, including plastics and composites. Therefore, the recitation of a tunnel formed from a bent sheet of metal is believed to be new matter.

The Applicants disagree.

The Applicants wish to clarify that the claims do not recite a tunnel "formed from a single sheet of metal", and the claims should not be construed to be so limited. The claims recite a tunnel "including at least one piece of bent sheet metal".

The Applicants submit that the original disclosure of the present application, through its incorporation by reference of Canadian Patent Application No. 2,256,944 (the "Canadian

Application”), supports the recitation of a tunnel including at least one piece of bent sheet metal.

As the Examiner has pointed out on page 2 of her rejection, the Canadian Application shows a frame 10 with a tunnel area 27.

The Examiner is requested to review paragraphs [0009]-[0012] of the declaration of Jean-Yves Leblanc filed herewith. Mr. Leblanc states, *inter alia*:

If a person skilled in the art were to construct the frame (10) and tunnel (27) shown in Figure 11 for use in a snowmobile, they would inevitably be made of bent sheet metal.

[...]

While it is known that the tunnel (27) shown in Figure 11 could be made with one of a number of suitable metals, such as steel or aluminum, it is also known that it would not be made of any material other than metal, such as plastics or composites. [...] To my knowledge, no production snowmobile has ever been manufactured with a frame having a tunnel made of plastic, composite, or any material other than sheet metal.

[...]

Therefore, a person skilled in the art would understand the ‘944 application... to disclose a tunnel made of bent sheet metal.

In brief, as described in Mr. Leblanc’s declaration, it is apparent that a person skilled in the art of snowmobiles would readily understand that the snowmobile frames depicted in Figures 11 and 12 of the Canadian Application are made of bent sheet metal. It is believed therefore that that the recitation that “the tunnel including at least once piece of bent sheet metal”, has been described in specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Therefore, the Applicants submit that the recitation in claims 1-49, 77-84, 87-88 and 90 of a “tunnel including at least one piece of bent sheet metal” is supported by the application as originally filed, and the Examiner’s rejection should be withdrawn.

In regard to Rejection of Claims 40-43, 45-49, 77-82 and 88 Under 35 USC § 103(a)

The Examiner has rejected claims 40-43, 45-49, 77-82 and 88 under 35 U.S.C. § 103(a), as being unpatentable over Yasui, U.S. Patent No. 4,848,503, in view of “The Seated Man (Homo Sedens) The seated work position Theory and Practice” by A.C. Mandal and Marier, U.S. Patent No. 5,660,245. The Applicants disagree.

The Examiner’s attention is directed to the following feature of claims 40, 45, 46, 77, 81 and 82:

a frame including a tunnel, the tunnel including at least one piece of bent sheet metal;

As the Applicants have indicated in previous communications, and as the Examiner has indicated on page 9 of her rejection, Yasui does not teach a tunnel formed from bent sheet metal. Therefore, the above feature of claims 40, 45, 46, 77, 81 and 82 is not taught by Yasui.

This deficiency in Yasui is not remedied by Mandal. Mandal does not teach any particular frame structure for a snowmobile. Therefore, irrespective of whether it is appropriate to combine Yasui (and as Applicants describe hereinbelow it is believed not to be), the combination of Yasui and Mandal does not teach a snowmobile having a tunnel including at least one piece of bent sheet metal.

To remedy this deficiency, the Examiner uses Marier. She asserts on page 9 of her rejection that

Marier shows a snowmobile with a rear tunnel section 12 with a horizontal top 27 and vertical sides 26 formed from a sheet of aluminum.

It would have been obvious to one of ordinary skill in the art to form the rear tunnel structure of Yasui from aluminum sheeting, as taught by Marier, in order to provide a high strength, light weight barrier between the track and the rider.

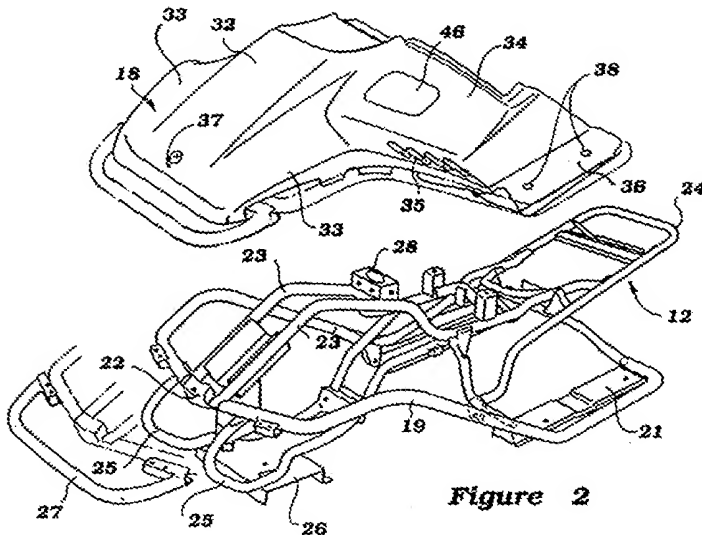
The Applicants submit that it would not have been obvious to one of ordinary skill in the art to modify Yasui in view of Marier to provide a tunnel including at least one piece of bent sheet metal, because Yasui specifically teaches away from this modification.

Specifically Yasui is directed to “a small snowmobile and a drive arrangement therefor...” (col .1, lines 6-7). It states: “As the popularity of snowmobiles has grown, the size and power output of many of the snowmobiles has grown proportionately. As a result, many of the snowmobiles now sold are very large machines. Although such large and heavy machines have great appeal, there is an interest in a smaller lighter machines that can be conveniently used by a single person.” (col. 1, lines 12-20).

As a solution to this problem the Yasui patent teaches a “small snowmobile 11... comprised of frame assembly, indicated generally by the reference numeral; 12 which may be of the welded up tubular type. The construction of the frame assembly 12 is described in more detail in copending application entitled “Frame and Body Construction For Small Snowmobile”, patent application Ser. No. 163,389, filed Mar. 2, 1988 in the names of Toshihiro Yasui, Tsuneo Isobe and Masanori Sugita, which is incorporated herein by reference.” (col. 2, lines 29-35).

U.S. application serial 163,380 issued as United States Patent No. 4,892,164 on Jan. 9, 1990 and is referred to hereinafter as the Yasui ‘164 Patent. It states: “there is a need for a light weight highly maneuverable snowmobile that can accommodate primarily a single rider. Such a snowmobile should be highly maneuverable, relatively robust in construction but should, at the same time, offer ease of servicing. Many conventional snowmobiles are formed with a combined body frame structure that is made up of a plurality of steel stampings that are welded together. Such arrangements obviously require substantial weight and the necessity of using several different stampings and welding them together adds to the cost of the overall assembly. Furthermore, such welded up constructions make it difficult to position the driving components of the snowmobile in such a way that the snowmobile can be conveniently serviced. It is therefore a principal object of this invention to provide a light weight frame and body construction for a small snowmobile.” (col. 1, lines 11-28) (emphasis added).

“The snowmobile 11 is comprised of a frame assembly 12 which is of the tubular welded up type and which dirigibly supports a pair of front skis 13 at its forward end.” (col. 2, lines 34-37).



**Figure 2**

“Referring now primarily to Fig. 2, the frame 12, as has been previously noted, is of the welded up tubular type. The frame 12 is comprised of first formed frame member 19 that forms generally an outer perimeter of the frame 12. The frame member 19, may be formed from one or a plurality of tubes and carried mounted pads 21 at outwardly extending sides that are adapted to accommodate the feet of a rider seated on the seat 15...” (col. 2, lines 52-59).

The frame further includes a pair of inner tubular frame member 23 which extend inwardly of the perimeter member 19 from its front end to a rear seat rail portion 24. The seat rail portion 24 is comprised of a separate tube or tubes. In addition, a pair of down tubes 25 are connected to forward ends of the perimeter frame member 19 and extend rearwardly and are connected at their rear ends to the inner frame members 23...” (col. 2, line 62 to col. 3, 1).

Bearing this in mind, the Examiner is requested to review paragraphs [0013]-[0020] of the declaration of Jean-Yves Leblanc filed herewith. Particularly, Mr. Leblanc states that (after having reviewed both Yasui patents): “I understand Yasui to specifically teach not using a frame of bent sheet metal in a snowmobile” (paragraph [0017]) and “[t]herefore, modifying the vehicle of Yasui to include a bent sheet metal frame would be contrary to the express teaching of Yasui” (paragraph [0018]).

Furthermore, referring to paragraph [0019] of the declaration, it is apparent that to one skilled in the art Yasui teaches that sheet metal frames are unsuitable not only because of their weight, but also because the welding process adds cost and because sheet metal frames do not allow the driving components of the snowmobile of Yasui to be conveniently serviced. These latter two concerns are a result of the fact that the frame is made of sheet metal, and are independent of the specific metal from which the frame is constructed. Yasui teaches that the solution to these problems is to substitute alternative, tubular structure in place of the sheet metal frame. Therefore, any sheet metal frame, regardless of what metal is used, would be contrary to the teaching of Yasui. As such, using stamped aluminum instead of stamped steel, as disclosed in Marier, would defeat two of the three stated purposes of Yasui.

Therefore, a person skilled in the art would understand that Yasui cannot be combined with Marier to provide the vehicle of Yasui with a sheet metal frame.

Therefore, at least one feature of claims 40, 45, 46, 77, 81 and 82 is not taught by Yasui, Mandal or Marier, alone or in combination, which combination is denied. As such, the Examiner is requested to withdraw her rejection of claim 40 and claims 41-43 and 88 depending therefrom, claim 45, claim 46 and claims 47-49 depending therefrom, claim 77 and claims 78-80 depending therefrom, and claims 81 and 82.

Although not believed to be necessary to respond to the Examiner's rejection of these claims under 103(a), as the Examiner has raised the issue of Mandal, Applicants wish to respond.

Contrary the Examiner's assertion, Applicants submit that a person skilled in the art would understand that Mandal cannot be combined with Yasui to provide the snowmobile of Yasui with the seating position of Mandal.

In this respect, the Examiner is referred to paragraphs [0023] to [0033] of the Leblanc Declaration. At paragraph [0031], Mr. Leblanc states:

[w]hen designing a snowmobile, in particular configuring the seating position of a rider on a snowmobile, my primary concern is to make it convenient for the rider to actively ride the snowmobile by standing up and shifting his weight, and not to ensure that a rider will be comfortable while sitting still on

the snowmobile with an unchanging posture for extended periods of time. [...] Therefore, I would have no reason to apply the teachings of Mandal to the design of a snowmobile, because Mandal does not address a situation that snowmobile designers see as a problem or attempt to remedy.

It is apparent that the teaching of Mandal would not commend itself to a person skilled in the art of snowmobile design. In the art of snowmobile design, the primary concerns relating to the seating position are enabling the rider to conveniently reposition parts of his body to assist in riding the snowmobile, and to allow the rider to stand up while the snowmobile is moving to absorb the shocks caused by travelling over uneven terrain. Mandal is directed to an unrelated art, namely sitting in a stationary chair for long periods of time. In addition, Mandal addresses a problem that does not arise in snowmobile design, namely the problem of sitting in the same posture for several hours.

As such, a person skilled in the art would not look to Mandal when configuring the seating position of a rider on a snowmobile. Therefore, the teachings of Mandal cannot be combined with the teachings of Yasui to provide the seating position of Mandal on the vehicle of Yasui.

In regard to Rejection of Claim 83 Under 35 USC § 103(a)

The Examiner has rejected claim 83 under 35 U.S.C. § 103(a), as being unpatentable over Yasui in view of Mandal and Marier, and further in view of Stacy, U.S. Patent No. 3,692,130. The Applicants disagree.

The Examiner's attention is directed to the following feature of claims 77, 81 and 82:

a frame including a tunnel, the tunnel including at least one piece of bent sheet metal;

As discussed above with respect to claims 40-43, 45-49, 77-82 and 88, the above feature of claims 77, 81 and 82 is not taught by Yasui, and this deficiency in Yasui is not remedied by Mandal or Marier.

The Applicants submit that this deficiency in Yasui is also not remedied by Stacy.

As discussed above with respect to claims 40-43, 45-49, 77-82 and 88, Yasui cannot be modified to include a tunnel including at least one piece of bent sheet metal without

contradicting the express teaching of Yasui and defeating its stated purpose. Therefore, even if Stacy could be interpreted to teach a tunnel including at least one piece of bent sheet metal, which is not admitted, this teaching could not be applied to modify Yasui to include a tunnel including at least one piece of bent sheet metal.

Therefore, at least one feature of claims 77, 81 and 82 is not taught by Yasui, Mandal, Marier or Stacy, alone or in combination, which combination is denied. As such, the Examiner is requested to withdraw her rejection of claim 83 depending therefrom.

In regard to Rejection of Claims 6-39 and 44 Under 35 USC § 103(a)

The Examiner has rejected claims 6-39 and 44 under 35 U.S.C. § 103(a), as being unpatentable over Yasui in view of Applicants' Admitted Prior Art (AAPA) and Marier. The Applicants disagree.

The Examiner's attention is directed to the following feature of claims 6, 10, 16, 20, 26, 30, 36 and 44:

a frame including a tunnel, the tunnel including at least one piece of bent sheet metal;

As discussed above with respect to claims 40-43, 45-49, 77-82 and 88, the above feature of claims 6, 10, 16, 20, 26, 30, 36 and 44 is not taught by Yasui, and this deficiency in Yasui is not remedied by Marier.

The Applicants submit that this deficiency in Yasui is also not remedied by AAPA.

Firstly, AAPA relates to the center of gravity of conventional snowmobiles, and cannot be applied to or combined with Yasui.

In this respect, the Examiner is referred to paragraphs [0021] – [0022] of the declaration of Jean-Yves Leblanc. At paragraph [0022] it states,

[p]aragraph [0004] of the present application as published describes a "conventional snowmobile". [...] As I understand this statement, it does not apply to the snowmobile of Yasui. The snowmobile of Yasui differs in a number of respects from conventional snowmobiles. [...] I do not understand paragraph [0004] of the application to make any representation about the location of the center of gravity of Yasui, because Yasui is not



the type of vehicle being described, namely a “conventional snowmobile”.

It is apparent that the “conventional snowmobile” described in AAPA is not the same type of vehicle as the snowmobile of Yasui. A person skilled in the art of snowmobile design would understand that a statement regarding the location of the center of gravity of a conventional snowmobile does not apply to any type of vehicle of a different construction than a conventional snowmobile. In addition, such a statement gives no indication of the location of the center of gravity of any other type of vehicle. In particular, AAPA does not indicate the location of the center of gravity of the vehicle of Yasui, because Yasui is not a conventional snowmobile. Therefore, AAPA cannot be combined with Yasui to provide the vehicle of Yasui with the center of gravity located as in AAPA.

Secondly, AAPA cannot be combined with Yasui for the same reasons that Marier cannot be combined with Yasui, namely that Yasui teaches away from its combination with AAPA (AAPA being a conventional snowmobile with a conventional snowmobile tunnel having bent sheet metal).

Therefore, at least one feature of claims 6, 10, 16, 20, 26, 30, 36 and 44 is not taught by Yasui, Marier or AAPA, alone or in combination, which combination is denied. As such, the Examiner is requested to withdraw her rejection of claim 6 and claims 7-9 depending therefrom, claim 10 and claims 11-15 depending therefrom, claim 16 and claims 17-19 depending therefrom, claim 20 and claims 21-25 depending therefrom, claim 26 and claims 27-29 depending therefrom, claim 30 and claims 31-35 depending therefrom, claim 36 and claims 37-39 depending therefrom, and claim 44.

In regard to Rejection of Claims 1-5, 84, 87 and 88 Under 35 USC § 103(a)

The Examiner has rejected claims 1-5, 84 and 87 under 35 U.S.C. § 103(a), as being unpatentable over Yasui in view of AAPA, Marier and “The Complete Snowmobile Handbook” by Dempsey. The Applicants disagree.

The Examiner’s attention is directed to the following feature of claims 1, 40, 84 and 87:

a frame including a tunnel, the tunnel including at least one piece of bent sheet metal;

As discussed above with respect to claims 40-43, 45-49, 77-82 and 88, the above feature of claims 1, 84 and 87 is not taught by Yasui and this deficiency in Yasui is not remedied by AAPA or Marier.

The Applicants submit that this deficiency in Yasui is not remedied by Dempsey.

Dempsey does not teach any particular frame structure for a snowmobile. Therefore, Dempsey does not teach a snowmobile having a tunnel including at least one piece of bent sheet metal.

In addition, the Examiner has stated on page 14 of her rejection that

The Complete Snowmobile Handbook” describes snowmobile ranging in weight from 280 to 1538lb. An average of these would be approximately 900.

The Examiner then proceeds to use 900 pounds as an “average” weight for a snowmobile.

The Examiner is referred to paragraphs [0034]-[0037] of the declaration of Jean-Yves Leblanc. Specifically referring to paragraphs [0035]-[0037],

a person skilled in the art of snowmobile design would understand that Dempsey does not teach the weight of a snowmobile either in 1989 or today, and that a snowmobile designed in 1989, such as Yasui, would not have the same weight as a snowmobile in 1974.

In addition, even if Dempsey could be said to disclose the weight of a standard snowmobile at the time Yasui was published, Dempsey could not be used to determine the center of gravity of Yasui. A number of changes in snowmobile design between 1974 and 1989 have resulted in a redistribution of the weight of the vehicle. [...]

In addition, even if Dempsey could be said to disclose the weight of a standard snowmobile, this weight could not be applied to Yasui to calculate the center of gravity of the snowmobile of Yasui with a rider. Yasui describes “a smaller lighter machine” compared to the “large and heavy machines” commonly sold at the time. Therefore, the weight of Yasui

would be less than a standard snowmobile weight disclosed at or before the time of Yasui.

It is apparent that the weight of a snowmobile disclosed in Dempsey does not correspond to the weight of either the snowmobile of Yasui or the conventional snowmobile of AAPA. Therefore, the teaching of Dempsey cannot be combined with Yasui or AAPA to compute the location of the center of gravity of a particular snowmobile, or by extension the location of the center of gravity of a particular snowmobile in combination with a rider in a particular position.

Therefore, the Examiner's calculation of the location of the center of gravity of the vehicle of Yasui with the rider is doubly flawed. First, the Examiner incorrectly situates the center of gravity of the vehicle of Yasui at the forward-most axle of Yasui; and second, the Examiner incorrectly attributes to the vehicle of Yasui a weight of 900 pounds. As such, the Examiner's calculation of the location of the center of gravity of Yasui with a rider based on these quantities is incorrect, and as such the Examiner's determination that the vehicle of Yasui can be modified to teach every element of claims 1-5, 84, 87 and 88 is incorrect.

Therefore, at least one feature of claims 1, 40, 84 and 87 is not taught by Yasui, AAPA, Marier or Dempsey, alone or in combination, which combination is denied. As such, the Examiner is requested to withdraw her rejection of claim 1 and claims 2-5 depending therefrom, claims 84 and 87, and claim 88 depending from claim 40.

In view of the above remarks, the Applicants respectfully submit that all of the currently pending claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in a better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

At the time of filing of the present response, the Office was authorized to charge the fees believed to be necessary to a credit card. In case of any under- or over-payment or should any additional fee be otherwise necessary, the Office is hereby authorized to credit or debit (as the case may be) Deposit Account number 502977.

Respectfully submitted,

/Jonathan David Cutler/

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